

John Glenn Biomedical Engineering Consortium

Development of a Portable Unit for Metabolic Analysis (PUMA) Status Report

Accomplishments:

- Completed preliminary testing with prototype oxygen sensor electronics. Began developing algorithms to implement oxygen measurements into PUMA. Specified and ordered parts for second generation oxygen sensor.
- Completed preliminary (top-level) design of PUMA data acquisition and processing system.
- Began examining alternate method for phase shift measurement.
- Ordered and received two prototype flow sensors. Completed design and began fabrication of flow calibration tunnel.
- Computed nominal parameters for and ordered sources and detectors for CO₂ sensor.



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Publications/Presentations/Invited Lectures:

- Poster presentation at Case Research ShowcCase at Case Western Reserve University.

Future Work:

- Near term (next three months)
 - Flow sensor testing.
 - Select Pressure Transducer.
 - Complete prototype CO2 sensor.
 - Complete second generation O2 sensor.
- Mid-term (within the next year)
 - Complete design and testing of all PUMA subsystems.



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Schedule Updates/revisions:

- None

Issues:

- IFMP system slows down major purchases.

